



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0157; Project Identifier AD-2020-00483-T; Amendment 39-21806; AD 2021-23-08]

RIN 2120-AA64

Airworthiness Directives; Learjet Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Learjet Inc. (Learjet) Model 45 airplanes. This AD was prompted by reports of corrosion found on the upper surface of the lower center wing mid spar splice plate. This AD requires repetitively inspecting the center wing area for corrosion and deterioration of protective treatments, removing any corrosion, and treating any deteriorated areas. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Learjet Inc., One Learjet Way, Wichita, KS 67209; phone: (316) 946-2000; email: ac.ict@aero.bombardier.com; website: <https://businessaircraft.bombardier.com/en/aircraft/learjet.html>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0157; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Tara Shawn, Aviation Safety Engineer, Wichita ACO Branch, FAA, 1801 Airport Road, Wichita, KS 67209; phone: (316) 946-4141; fax: (316) 946-4107; email: tara.shawn@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial numbered Learjet Inc. (Learjet) Model 45 (Learjet 40), Model 45 (Learjet 45), Model 45 (Learjet 70), and Model 45 (Learjet 75) airplanes. The NPRM published in the *Federal Register* on July 28, 2021 (86 FR 40379). The NPRM was prompted by a report from Learjet of corrosion found in the center wing area of a Model 45 (Learjet 45) airplane. Exfoliating corrosion was found on the upper surface of the lower center wing mid spar splice plate during unrelated maintenance. The corrosion appeared to extend half way through the thickness of the splice plate. Since the initial report, the FAA has received 23 additional reports of corrosion from Learjet.

The FAA determined areas of the wing center section are not sealed against the elements; in addition, the fuselage has drain holes that allow condensation to drain into the center wing. The accumulation and retention of moisture in the center wing section may lead to corrosion. In the NPRM, the FAA proposed to require repetitively inspecting the center wing area for corrosion and deterioration of protective treatments, removing any corrosion, and treating any deteriorated areas. This condition, if not addressed, could

result in failure of the wing centerline joint and lead to partial wing separation with consequent loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from an individual. The following presents the comment received on the NPRM and the FAA's response to the comment.

An individual requested the FAA allow credit for previous visual inspections using Inspection Reference Number (IRN) 5710190. The commenter stated that IRN 5710190 requires the same inspection as the applicable service bulletin. The commenter noted that while some operators might not have used the service bulletin listed in paragraph (k) of the NPRM, operators of aircraft over 8 years old will have used IRN 5710190.

The FAA agrees and has added the applicable maintenance manual references for IRN 5710190 to paragraph (k) of this AD, which provides credit for previous actions.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for the changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed the following service documents required for compliance with this AD:

- Bombardier Learjet 40 Service Bulletin 40-57-06, Revision 1, dated October, 26, 2020;
- Bombardier Learjet 45 Service Bulletin 45-57-13, Revision 1, dated October, 26, 2020;
- Bombardier Learjet 70 Service Bulletin 70-57-02, Revision 1, dated October, 26, 2020; and
- Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 2, dated April 19,

2021.

As applicable to the model configuration specified, each service bulletin contains procedures for inspecting for corrosion and deterioration of protective treatments of the center wing area from the front spar to the rear spar between wing stations 33.00L to 33.00R, treating deteriorated areas, and removing any corrosion. Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 2, dated April 19, 2021, does not apply to newly-manufactured airplanes, since Learjet added this inspection to the Airworthiness Limitation Section, which will be delivered with new airplanes starting at S/N 45-597.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 450 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Inspect	7.5 work-hours x \$85 per hour = \$637.50	Not applicable	\$637.50	\$286,875
Report to FAA	1 work-hours x \$85 per hour = \$85	Not applicable	\$85	\$38,250

The extent of corrosion and deterioration of protective treatments may vary significantly from airplane to airplane. The FAA has no way of determining how much damage may be found on each airplane, the cost to remove the corrosion or treat deteriorated areas (or replacing the part, if needed), or the number of airplanes that may require repair.

If corrosion is found and removed, the FAA estimates that it would take 2 work-hours per airplane to provide data to Learjet. With an average labor rate of \$85 per work-hour, the FAA estimates a cost of \$170 per airplane.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-23-08 Learjet Inc.: Amendment 39-21806; Docket No. FAA-2021-0157; Project Identifier AD-2020-00483-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Learjet Inc. Model 45 (Learjet 40), Model 45 (Learjet 45), Model 45 (Learjet 70), and Model 45 (Learjet 75) airplanes, serial numbers 45-002 through 45-596 and 45-2001 through 45-2146, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 5714, Wing, Center Box.

(e) Unsafe Condition

This AD was prompted by reports of corrosion found on the upper surface of the lower center wing mid spar splice plate. The FAA is issuing this AD to detect and correct corrosion or deterioration of protective treatments on the center wing area. The unsafe condition, if not addressed, could result in failure of the wing centerline joint and lead to partial wing separation with consequent loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Applicable Service Bulletins

Use the following service bulletin, as applicable to your airplane model configuration, to perform the actions required by paragraph (h) of this AD:

(1) Bombardier Learjet 40 Service Bulletin 40-57-06, Revision 1, dated October 26, 2020;

(2) Bombardier Learjet 45 Service Bulletin 45-57-13, Revision 1, dated October 26, 2020;

(3) Bombardier Learjet 70 Service Bulletin 70-57-02, Revision 1, dated October 26, 2020; or

(4) Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 2, dated April 19, 2021.

(h) Wing Center Spar Inspection, Related Investigative Inspections, and Corrective Actions

At the applicable initial compliance time specified in paragraph (h)(1) or (2) of this AD and thereafter at intervals not to exceed 8 years, inspect the center wing area for corrosion and deterioration of protective treatments and perform all related corrective actions by following the Accomplishment Instructions, steps 3.A. and 3.B., of the applicable service bulletin listed in paragraph (g) of this AD.

(1) For airplanes with 8 or fewer years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness, whichever date is earlier: Before or upon accumulating 8 years or within

12 months after the effective date of this AD, whichever occurs later; or

(2) For airplanes that have accumulated more than 8 years since the date of issuance of the original airworthiness certificate or the date of issuance of the original export certificate of airworthiness, whichever date is earlier: Within 12 months after the effective date of this AD.

(i) Service Information Exception

Where Bombardier Learjet 40 Service Bulletin 40-57-06, Revision 1, dated October 26, 2020, Bombardier Learjet 45 Service Bulletin 45-57-13, Revision 1, dated October 26, 2020, Bombardier Learjet 70 Service Bulletin 70-57-02, Revision 1, dated October 26, 2020, and Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 2, dated April 19, 2021, specify contacting Learjet Inc. for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

(j) Reporting Requirement

Within 30 days after completing the initial inspection required by paragraph (h) of this AD or within 30 days after the effective date of this AD, whichever occurs later, submit a report of the findings (both positive and negative) of the inspection to: Wichita-COS@faa.gov; or Ann Johnson, Wichita ACO Branch, FAA, 1801 Airport Road, Wichita, KS 67209. This reporting requirement is limited to the initial inspection results only. The report must include: the name of the owner; the address of the owner; the name of the organization doing the actions required by this AD; the date the inspection was completed; the name of the person submitting the report; the address, telephone number, and email of the person submitting the report; the airplane serial number; the date of issuance of the original airworthiness certificate, or the date of issuance of the original export certificate of airworthiness (whichever date is earlier); whether protective treatments are deteriorated, and if so, the location of deteriorated areas; whether corrosion was detected, and if so, the location of corrosion; and a list of parts replaced if the level of corrosion required replacement of parts.

(k) Credit for Previous Actions

You may take credit for the initial wing spar inspection required by the introductory text to paragraph (h) of this AD if you performed the visual inspection before the effective date of this AD using Bombardier Learjet 40 Service Bulletin 40-57-06, Basic Issue, dated February 25, 2019; Bombardier Learjet 40 Maintenance Manual MM-105, Temporary Revision No. 4-32, Inspection Reference Number AC5710190, dated March 25, 2021; Bombardier Learjet 40 Maintenance Manual MM-105, Inspection Reference Number AB5710190, dated April 29, 2019, or November 14, 2019; Bombardier Learjet 45 Service Bulletin 45-57-13, Basic Issue, dated February 25, 2019; Bombardier Learjet 45 Maintenance Manual MM-104, Temporary Revision No. 4-47, Inspection Reference Number AC5710190, dated March 25, 2021; Bombardier Learjet 45 Maintenance Manual MM-104, Inspection Reference Number AB5710190, dated April 29, 2019, or November 14, 2019; Bombardier Learjet 70 Service Bulletin 70-57-02, Basic Issue, dated February 25, 2019; Bombardier Learjet 70/75 eINSPECTOR version (2019.2.25) thru version (2021.4.23), Inspection Reference Number 5710190; Bombardier Learjet 75 Service Bulletin 75-57-01, Basic Issue, dated February 25, 2019; or Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 1, dated October 26, 2020.

(1) To take credit for the initial inspection, you must comply with paragraph (j) of this AD within 30 days after the effective date of this AD.

(2) You cannot take credit for the recurring inspections, only the initial inspection.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Wichita ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by a Learjet Inc. Designated Engineering Representative, or a Unit Member of the Learjet Organization Designation Authorization, that has been authorized by the Manager, Wichita ACO Branch, to make those findings. To be approved, the repair, modification, or alteration method must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(m) Related Information

For more information about this AD, contact Tara Shawn, Aviation Safety Engineer, Wichita ACO Branch, FAA, 1801 Airport Road, Wichita, KS 67209; phone: (316) 946-4141; fax: (316) 946-4107; email: tara.shawn@faa.gov.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bombardier Learjet 40 Service Bulletin 40-57-06, Revision 1, dated October, 26, 2020.

(ii) Bombardier Learjet 45 Service Bulletin 45-57-13, Revision 1, dated October, 26, 2020.

(iii) Bombardier Learjet 70 Service Bulletin 70-57-02, Revision 1, dated October, 26, 2020.

(iv) Bombardier Learjet 75 Service Bulletin 75-57-01, Revision 2, dated April 19, 2021.

(3) For service information identified in this AD, contact Learjet Inc., One Learjet Way, Wichita, KS 67209; phone: (316) 946-2000; email: ac.ict@aero.bombardier.com; website: businessaircraft.bombardier.com/en/aircraft/learjet.html.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 28, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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